REVISED AMENDMENT TO THE SPECIFICATION

Applicants reproduce the specification amendments as shown in Applicants previous response, because the Advisory Action mailed February 16, 2006 indicates that these specification amendments were not entered. Applicants respectfully request that these amendments be entered herein.

Please add the five below-numbered paragraphs after paragraph [0013] of the specification as shown below:

[0013.1] In another embodiment according to the present invention, a method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprises the steps of: optimizing a number, placement and size of a plurality of fractures in the subterranean formation so as to determine a maximum interference spacing between the plurality of fractures by (a) determining one or more geomechanical stresses induced by each fracture based on the dimensions and location of each fracture, (b) determining a geomechanical maximum number of fractures based on the geomechanical stresses induced by each of the fractures, and (c) determining a predicted stress field based on the geomechanical stresses induced by each fracture; drilling at least one substantially vertical well bore intersecting the coal seam; drilling at least one substantially horizontal well bore disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore; and fracturing the coal seam along the at least one substantially horizontal well bore using a hydrajetting tool to produce the plurality of fractures, wherein the plurality of fractures is spaced according to the maximize interference spacing between the plurality of fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

[0013.2] In another embodiment according to the present invention, a method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprises the steps of: optimizing a number, placement and size of a plurality of fractures in the subterranean formation so as to determine a maximum interference spacing between the plurality of fractures by (a) determining one or more geomechanical stresses induced by each fracture based on the dimensions and location of each fracture, (b) determining a geomechanical maximum number of fractures based on the geomechanical stresses induced by each of the fractures, and (c) determining a predicted stress field based on the geomechanical stresses induced by each fracture; drilling at least one substantially vertical well bore intersecting the coal seam; logging the subterranean formation by inserting logging equipment into the at least one substantially vertical well bore; casing the at least one substantially vertical well bore; drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores is spaced to maximize interference between the substantially horizontal well bores; lining or casing the plurality of substantially horizontal well bores; and fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrajetting tool to produce the plurality of fractures, wherein the plurality of fractures is spaced according to the maximize interference spacing between the plurality of fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

[0013.3] In another embodiment according to the present invention, a method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprises the steps of: optimizing a number, placement and size of a plurality of fractures in the subterranean formation so as to determine a maximum interference spacing between the plurality of fractures by (a) determining one or more geomechanical stresses induced by each fracture based on the dimensions and location of each fracture, (b) determining a geomechanical maximum number of fractures based on the geomechanical stresses induced by each of the fractures, and (c) determining a predicted stress field based on the geomechanical stresses induced by each fracture; drilling at least one substantially vertical well bore intersecting the coal seam; logging the subterranean formation by inserting logging equipment into the at least one substantially vertical well bore; casing the at least one substantially vertical well bore; drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores forms at least one fork pattern; lining or casing the plurality of substantially horizontal well bores; and fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrajetting tool to produce the plurality of fractures, wherein the plurality of fractures is spaced according to the maximize interference spacing between the plurality of fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

[0013.4] In another embodiment according to the present invention, a method for producing gas from a subterranean formation, wherein the subterranean formation includes a coal seam, comprises the steps of: optimizing a number, placement and size of a plurality of fractures in the subterranean formation so as to determine a maximum interference spacing between the plurality of fractures by (a) determining one or more geomechanical stresses induced by each fracture based on the dimensions and location of each fracture, (b) determining a geomechanical maximum number of fractures based on the geomechanical stresses induced by each of the fractures, and (c) determining a predicted stress field based on the geomechanical stresses induced by each fracture; drilling at least one substantially vertical well bore intersecting the coal seam; logging the subterranean formation by inserting logging equipment into the at least one substantially vertical well bore; casing the at least one substantially vertical well bore; drilling a plurality of substantially horizontal well bores disposed substantially within the coal seam and exiting from the at least one substantially vertical well bore, wherein the plurality of substantially horizontal well bores forms a radial pattern; lining or casing the plurality of substantially horizontal well bores; and fracturing the coal seam along the plurality of substantially horizontal well bores using a hydrajetting tool to produce the plurality of fractures, wherein the plurality of fractures is spaced according to the maximize interference spacing between the plurality of fractures and wherein the plurality of fractures enhances the production of gas from the coal seam of the subterranean formation.

[0013.5] The step of optimizing a number, placement and size of a plurality of fractures may occur before the step of fracturing the coal seam. Other embodiments according to the present invention may include one or more of the following steps: determining a cost-effective number of fractures; determining an optimum number of fractures, where the optimum number of fractures is the maximum cost-effective number of fractures that does not exceed the geomechanical maximum number of fractures; spacing the fractures a uniform distance from each other; creating the fractures with a uniform size. Additionally, steps (a), (b), and (c) in each of the above embodiments, may be repeated after each fracture is created. Further, the repeating step may comprise the steps of gathering and analyzing real-time fracturing data for each fracture created. In certain embodiments, methods that include the gathering of real-time fracturing data may comprise the steps of: (i) measuring a fracturing pressure while creating a current fracture; (ii) measuring a fracturing rate while creating the current fracture; and (iii) measuring a fracturing time while creating the current fracture. In certain embodiments, the measuring of fracturing pressure may be accomplished by using one or more transducers located at a wellhead of the at least one substantially vertical well bore, the measuring of fracturing pressure may be accomplished using one or more transducers located down hole, and the fracturing pressure is measured in a tubing. It is further recognized that the analyzing of real-time fracturing data may comprise the steps of: determining a new stress field, based on the real-time fracturing data; and comparing the new stress field with the predicted stress field. Certain embodiments may further comprise one or more of the following steps: the step of decreasing the number of fractures in response to the real-time fracturing data; the step of increasing the distance between the fractures in response to the real-time fracturing data; and the step of adjusting the size of the fractures in response to the real-time fracturing data.